Geometry honors GSP investigation

Perpendicular and angle bisectors

***Investigate the following using Geometer’s Sketchpad.***

1. If a point is on the perpendicular bisector of a segment, then it is from the endpoints of the segment.

*(To construct the perpendicular bisector, construct a midpoint of a segment, then the perpendicular through the midpoint)*

2. The shortest distance from a point to a line is measured along the from the point to the line.

*(To investigate, construct a line and a point not on the line. Construct a point on the line, then construct the segment between the two points. Measure the length of the segment and move the point along the line)*

3. If a point is on the bisector of an angle, then it is from the sides of the angle.

*(Construct an angle and the angle bisector. Construct a point on the angle bisector. Select the point and one of the sides of the angle and measure distance. Do the same for the point and the other side of the angle.)*